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FELIS OREGONENSIS RAF. AGAIN!

IN his recent 'Revision of the Pumas' (*Proc. Wash. Acad. Sci.*, pp. 577-600), Dr. C. Hart Merriam devotes over a page to the inapplicability of the above name and to censuring my action in bringing it forward to replace *F. hippelestes olympus* given by himself in 1897. He states that it is a 'fallacious interpretation of our principles of nomenclature' to replace a name well characterized and accompanied by definite type and locality, by an older one deficient in these respects. This statement will, I think, be questioned by many zoologists who have erred in this way more than I.

Personally, I would be only too glad to throw out of consideration all the names proposed by Rafinesque and others of his time, as it would save us a deal of trouble, but if we recognize the principles of priority I see no excuse for such action, and such questions as the present one resolve themselves entirely into a consideration of the applicability of the older name.

This is largely a matter of individual opinion and in the absence of any tribunal for the consideration of a uniform nomenclature for our mammals individual preference will prevail. However a few words regarding Dr. Merriam's stand may not be out of place.

In Rafinesque's first paper he undoubtedly has in mind the *Felis concolor* group, that will be admitted on all hands.

In his second paper he names a variety of the puma (as mentioned in the first paper) from northwestern United States (Oregon by implication). The absence of a definite type locality in no way invalidates the name if otherwise satisfactorily diagnosed. We have many names now in use with just as vague type localities.

The description is very brief, but as good as many other early diagnoses and to my mind clearly indicates the same animal later characterized by Dr. Merriam. Moreover, I do not think it is 'grossly incorrect.'

Rafinesque says 'Dark brown, nearly black on the back, belly white.'

Dr. Merriam says 'Dark rufous brown, darkest along middle of back, backs of ears black,

tip of tail blackish, breast and inguinal region soiled whitish, anterior part of throat white.'

Rafinesque had no 'manual of colors' and was of course not as exact as our present-day systematists, but it seems to me that his description is sufficiently accurate.

As to Dr. Merriam's argument that he probably never saw a specimen of the animal, we have positively no evidence one way or the other, and the fact does not affect the validity of the name nor do Dr. Merriam's further remarks about the other unrecognized cats that Rafinesque speaks of. The descriptions of *Cervus macrourus* and *C. hemionus* of the same author which are recognized and adopted by Dr. Merriam are associated with a lot of unidentifiable descriptions, and are admittedly based upon descriptions of travelers, while the diagnoses are no better than that of *Felis oregonensis*. If one stands, so should the others, in my estimation.

I might add that, so far as I am aware, every one who has written on this puma since my note appeared in SCIENCE has followed my views, even Dr. Merriam himself, who adopted the name *oregonensis* without comment, in his 'Biological Survey of Mt. Shasta' (p. 104).

As to the statement that no name based on hearsay accounts of travelers would be accepted if published to-day, we might suggest some recent cases that come pretty near to this, such as *Equus johnsoni*, which was based upon hearsay accounts of native Africans and two strips of skin, and *Macrias amissus* (SCIENCE, December 13), on a photograph and regretful recollections of a fish that was lost overboard after having been captured!

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A VERY SENSITIVE THERMOSTAT.

FOR many forms of scientific investigation constancy of temperature is required. Such constancy may be secured, within a few hundredths of a degree, by several types of thermostat. For certain inquiries undertaken by the writer relative to the so-called 'critical' phenomena of liquids and gases, a much greater degree of accuracy was necessary.

To meet this demand, a thermostat was devised, of which a description will shortly appear in the *Journal of Physical Chemistry*. The regulator of this instrument functionates so perfectly that the temperature can be kept continuously at the same thousandth of a degree for hours at a time. It is so constructed moreover as to be capable of adjustment, within one or two hundredths of a degree, to any desired temperature over a range of about fifty degrees.

The most important factors which make such fineness of regulation possible are the following:

1. An extremely efficient circulation in the bath, which eliminates all local differences of temperature large enough to be readable.

2. Such a construction of the regulator that the expansive medium feels each minutest change of temperature and reacts promptly to it.

3. Provision for supplying the bath at all times with just the amount of heat needed, and no more. The regulation does not consist in alternately admitting and shutting off the inflow of heat, but in a 'throttling' of the same.

The extreme accuracy of function mentioned above is naturally obtained only when the thermostat is shielded from sudden changes of radiation. But excellent results are possible without such protection. Without the use of any insulation whatever, the bath can be held at a temperature of thirty or forty degrees within a hundredth of a degree.

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SCIENTIFIC NOMENCLATURE.

TO THE EDITOR OF SCIENCE: In SCIENCE for March 21, I find an article on 'Scientific Nomenclature,' by Mr. Frank W. Very, which concludes with the following words:

Scientific descriptions remain unintelligible to the lazy man who hates to use the dictionary. They are free property to all who are willing to take this trouble.

On other pages of SCIENCE for March 21 (pp. 458 and 459), I find the words 'ecology' and 'ecological.' As I had never seen them

before, I said to myself: 'Here is my chance to vindicate Mr. Very's judicious hint about the lazy man and the dictionary.' So I turned to the Century dictionary, but did not find ecology or ecological. I next had recourse to the new English dictionary of Murray, without success, and then to the new edition of Webster, published the present year. None of these contain the words above mentioned. Recourse to Liddell & Scott's Greek lexicon was equally unavailing. I am moved, therefore, to ask you for an explanation of this new term.

HORACE WHITE.

NEW YORK,

March 22, 1902.

[Ecology has doubtless been coined from the same word as economics, being the branch of zoology or botany that is concerned with the dwelling place or distribution of animals or plants. It will probably come as a shock to biologists to learn that this word is not to be found in recent dictionaries, as it is used in elementary books and courses. The word appears to be post-Darwinian; perhaps some reader can tell us when and where it was first used.—EDITOR.]

BOTANICAL NOTES.

A POPULAR BOOK ON TREES.

WHATEVER tends to popularize a knowledge of our trees is to be commended. Any book which induces a considerable number of people to give more attention to the structure and habits of trees deserves our hearty approval. It is true that too often these popular books are so full of blunders that the scientific man is constantly irritated as he runs over the pages, and as a consequence he is too often unable to see the great body of valuable matter hidden beneath the superficial errors. We have had within the last year or two a number of useful books dealing with plants of various kinds from mushrooms and ferns to wild flowering herbs, shrubs and trees. Now, another book is brought out by Knight and Millet, of Boston, under the title of 'Studies of Trees in Winter,' by Annie Oakes Huntington, with an introduction by Professor Sargent. The fact that so eminent a botanist